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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of  
Maria Anna Wubben et al.

Serial No. 08/776,321

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Art Unit: 1761

For: PECTINS AS FOAM STABILIZERS FOR BEVERAGES HAVING A  
FOAM HEAD

D E C L A R A T I O N of Alexandra J.M. Wijsman

Alexandra Johanna Mathilda Wijsman herewith declares  
as follows:

1. I presently reside at Hondsdrafveld 23, 3448  
EC Woerden, the Netherlands.

2. I am an employee of Heineken Technical  
Services B.V. at Zoeterwoude, the Netherlands, the assignee  
of the present invention. I am a graduate of the Agricultural  
University of Wageningen, with a specialization in food  
technology. For about three years I have been involved in  
research on raw materials for the production of beer, such as  
polysaccharides.

3. In order to determine the effect of the type  
of pectin on foam stability, an experiment was conducted  
comparing beet-pectin with hop-pectin. I conducted part of  
the experiment; the other parts were conducted in my  
presence. The experiments and results are described as  
follows.

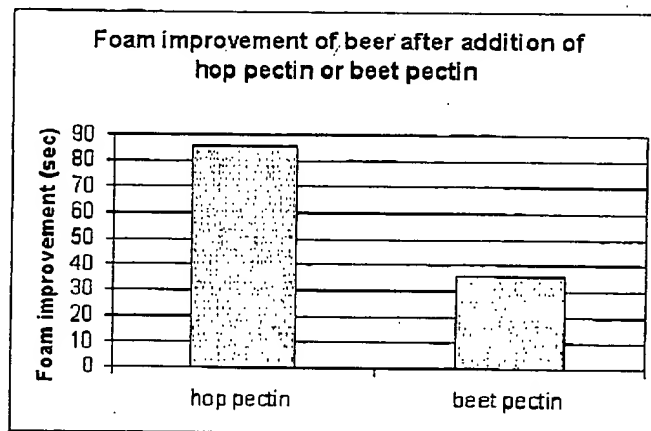
4. Pectin preparations containing beet pectin or  
hop pectin were dissolved in 5 ml water before being added to

beer in an amount of 30 mg/bottle (approximately 10 g per hectolitre). The bottles were shaken for 48 hours at room temperature. The foam stability was then determined using the Nibem foam meter.

5. The results of the test were as follows.

Comparison of foam improvement capability of hop pectin and beet pectin in beer

| Sample      | Foam stability (sec) |     |     |     | Average (sec) | Foam improvement (sec) |
|-------------|----------------------|-----|-----|-----|---------------|------------------------|
| control     | 257                  | 249 | 252 | 253 | 253           | -                      |
| hop pectin  | 349                  | 335 | 332 | 337 | 338           | 85                     |
| beet pectin | 284                  | 284 | 293 | 293 | 289           | 36                     |




6. The results of the test were surprising and unexpected. It was surprising and unexpected that hoppectin would improve the foam stability of beer by more than twice as many seconds as beet pectin.

7. The undersigned declares that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the document, or application, or any patent issuing thereon.

Signed this 15 day of December, 1998

By



Alexandra J.M. Wijsman